

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

What is claimed is:

1. **(Cancelled)** Please delete.
2. **(Cancelled)** Please delete.
3. **(Cancelled)** Please delete.
4. **(Cancelled)** Please delete.
5. **(Cancelled)** Please delete.
6. **(Cancelled)** Please delete.
7. **(Cancelled)** Please delete.
8. **(Cancelled)** Please delete.
9. **(Cancelled)** Please delete.
10. **(Cancelled)** Please delete.
11. **(Cancelled)** Please delete.
12. **(Cancelled)** Please delete.
13. **(Cancelled)** Please delete.
14. **(Cancelled)** Please delete.
15. **(Cancelled)** Please delete.

16. **(Cancelled)** Please delete.

17. **(Currently Amended)** A method for seismic data transmission comprising the steps of:

A. providing a plurality of seismic acquisition units, wherein each of said seismic acquisition units is capable of acquiring seismic data, receiving a short range radio transmission and transmitting a short range radio transmission;

B. utilizing a plurality of said seismic acquisition units to transmit seismic data via short range radio transmission to another seismic acquisition unit in the array;

C. utilizing a plurality of said seismic acquisition units to receive seismic data via short range radio transmission from another seismic acquisition unit in the array;

D. ~~The method of claim 16, further comprising the steps of~~ partitioning said plurality of seismic acquisition units into at least two sub-sets of seismic acquisition units; and

E. using a short range radio transmission technique having parameters set so that non-interfering radio transmission may be effected in each sub-set.

18. **(Original)** The method of claim 17, further comprising the steps of partitioning said plurality of seismic acquisition units into a third sub-set, wherein the first and third sub-set of seismic acquisition units are spaced apart from one another by said second sub-set of seismic acquisition units.

19. **(Original)** The method of claim 18, further comprising the step of assigning transmission parameters so the third sub-set of seismic acquisition units have the same short range radio transmission parameters as that assigned to the first sub-set.

20. **(Original)** The method of claim 17, further comprising the step of utilizing a plurality of said seismic acquisition units within said first subset to transmit seismic data via short range radio transmission to other seismic acquisition units in the first subset while simultaneously utilizing a plurality of said seismic acquisition units within said second subset to transmit seismic data via short range radio transmission to other seismic acquisition units in the

second subset, wherein each transmission is made utilizing the short range radio transmission parameters assigned to the respective subset.

21. **(Original)** The method of claim 17, further comprising the step of utilizing a plurality of said seismic acquisition units within said first subset to transmit seismic data via short range radio transmission to other seismic acquisition units in the first subset while simultaneously utilizing a plurality of said seismic acquisition units within said second subset to transmit seismic data via short range radio transmission to other seismic acquisition units in the second subset while simultaneously utilizing a plurality of said seismic acquisition units within said third subset to transmit seismic data via short range radio transmission to other seismic acquisition units in the third subset, wherein each transmission is made utilizing the short range radio transmission parameters assigned to the respective subset.
22. **(Original)** The method of 19, wherein each seismic acquisition unit has a radio transmission range and the seismic acquisition units within the first and third subsets are sufficiently spaced apart so as to fall outside the transmission range of any seismic acquisition unit within the respective subsets.
23. **(Original)** The method of 19, wherein each seismic acquisition unit has a radio transmission range that can be adjusted by adjusting the transmission parameters so that the first and third sub-sets have transmission ranges that do not interfere with one another.
24. **(Original)** The method of claim 16, wherein each acquisition unit has a set of transmission parameters associated therewith and an adjustable transmission range, the method further comprising the step of adjusting the transmission range by adjusting the transmission parameters.
25. **(Currently Amended)** The method of claim 16 ~~24~~, wherein the transmission range is adjusted by adjusting the transmission power.
26. **(Original)** The method of claim 1, wherein at least one seismic acquisition unit is capable of receiving short range radio transmissions from at least two other seismic acquisition units.

27. **(Original)** The method of claim 26, wherein each seismic acquisition unit is capable of receiving short range radio transmissions from at least two other seismic acquisition units.
28. **(Original)** The method of claim 26, wherein each seismic acquisition unit is capable of receiving short range radio transmissions from at least three other seismic acquisition units.
29. **(Cancelled)** Please delete.
30. **(Currently Amended)** A method for seismic data transmission comprising the steps of:
- A. providing at least three spaced apart seismic acquisition units deployed in an array, wherein each of said seismic acquisition units is capable of receiving a short range radio transmission and transmitting a short range radio transmission;
 - B. providing a receiving station for receiving a short range radio transmission from at least one seismic acquisition unit within said array;
 - C. subsequent to deployment, ~~The method of Claim 29 further comprising the step of~~ identifying at least two separate transmission paths from a seismic acquisition unit to the receiving station, wherein a transmission path is defined as a chain of at least two seismic acquisition units and the receiving station, each capable of communicating in series via short range radio transmission;
 - D. selecting a transmission path from the identified transmission paths based on a set of transmission path criteria; and
 - E. transmitting a signal along said selected transmission path.
31. **(Original)** The method of Claim 30 further comprising the step of transmitting a first signal along one transmission path and transmitting a second signal along the other transmission path.
32. **(Currently Amended)** The method of Claim 30 ~~29~~, wherein each of said seismic acquisition units is capable of acquiring seismic data.

33. **(Original)** The method of Claim 32, further comprising the step of acquiring seismic data utilizing said seismic acquisition units.
34. **(Original)** The method of Claim 33, wherein the transmitted signal received by the receiving station includes seismic data acquired by at least one of said seismic acquisition units.
35. **(Original)** The method of Claim 34, wherein the transmitted signal received by the receiving station includes seismic data acquired by a plurality of said seismic acquisition units.
36. **(Currently Amended)** The method of Claim 17 ~~16~~, wherein each seismic acquisition unit has a radio transmission range.
37. **(Original)** The method of Claim 36, wherein at least two seismic acquisition units fall within the radio transmission range of another seismic acquisition unit.
38. **(Original)** The method of Claim 36, wherein the radio transmission range of each seismic acquisition unit is omnidirectional.
39. **(Original)** The method of Claim 36, wherein the radio transmission range of at least one of the seismic acquisition units is omnidirectional.
40. **(Original)** The method of Claim 36, wherein the radio transmission range of at least one of the seismic acquisition units is unidirectional.
41. **(Currently Amended)** The method of claim 30 ~~29~~, wherein the transmission chain is comprised of a plurality of seismic acquisition units.
42. **(Original)** The method of claim 41, wherein said transmission chain includes each seismic acquisition unit in the array.
43. **(Cancelled)** Please delete.
44. **(Cancelled)** Please delete.

45. **(Original)** The method of claim 36, further comprising the step of adjusting the transmission range of a seismic acquisition unit so as to alter the number of other seismic acquisition units within radio transmission range of the adjusted seismic acquisition unit.
46. **(Cancelled)** Please delete.
47. **(Currently Amended)** The method of claim 30 ~~29~~, wherein said receiving station is within short range radio range of at least two seismic acquisition units.
48. **(Currently Amended)** The method of claim 30 ~~29~~, wherein said receiving station is within short range radio range of at least three seismic acquisition units.
49. **(Cancelled)** Please delete.
50. **(Original)** The method of claim 35, wherein said receiving station transmits control signals to said seismic acquisition units and said control signal is transmitted over the same transmission chain utilized to transmit seismic data from seismic acquisition units to the receiving station.
51. **(Original)** The method of claim 35, wherein said receiving station transmits control signals to said seismic acquisition units and said control signal is transmitted over a different transmission chain than that utilized to transmit seismic data from seismic acquisition units to the receiving station.
52. **(Cancelled)** Please delete.
53. **(Currently Amended)** The method of claim 30 ~~52~~, wherein the transmissions from said seismic acquisition units to the receiving station are made utilizing different transmission chains.
54. **(Currently Amended)** The method of claim 30 ~~29~~, further comprising the step of utilizing a long range transmission to transmit control signals from said receiving station to said seismic acquisition units.

55. **(Currently Amended)** The method of claim 17 ~~8~~, further comprising the step of utilizing a long range transmission to transmit control signals from said control station to said seismic acquisition units.
56. **(Currently Amended)** The method of claim 17 ~~1~~, wherein a transmission from a seismic acquisition unit includes information identifying the position of the seismic acquisition unit.
57. **(Currently Amended)** The method of claim 17 ~~1~~, wherein a transmission from a seismic acquisition unit includes information identifying the identity of the seismic acquisition unit.
58. **(Currently Amended)** The method of claim 30 ~~29~~, wherein said transmission path is preset among the seismic acquisition units.
59. **(Original)** The method of claim 58, wherein a second alternate transmission path is preset among the seismic acquisition units.
60. **(Currently Amended)** The method of claim 30 ~~29~~, wherein multiple transmission paths are identified.
61. **(Original)** The method of claim 60, further comprising the step of selecting a transmission path among the multiple transmission paths prior to transmitting.
62. **(Currently Amended)** The method of claim 17 ~~16~~, further comprising the step of generating a beacon signal from at least one of said seismic acquisition units.
63. **(Currently Amended)** The method of claim 30 ~~16~~, further comprising the step of determining the number of other seismic acquisition units within transmission range of a seismic acquisition unit.
64. **(Currently Amended)** The method of claim 30 ~~16~~, further comprising the step of determining the signal strength for other seismic acquisition units within transmission range of seismic acquisition unit.

65. **(Currently Amended)** The method of claim 30 ~~29~~, further comprising the step of generating a beacon signal and transmitting the beacon signal along the transmission path.
66. **(Original)** The method of claim 65, further comprising the step of verifying the transmission path by generating a beacon signal.
67. **(Original)** The method of claim 65, further comprising the step of utilizing said beacon signal to establish a synchronized recording time among the seismic acquisition units.
68. **(Original)** The method of claim 65, further comprising the step of simultaneously initiating recording of seismic data by said seismic acquisition units.
69. **(Original)** The method of claim 65, wherein seismic data transmitted from a seismic acquisition unit is time stamped.
70. **(Cancelled)** Please delete.
71. **(Cancelled)** Please delete.
72. **(Cancelled)** Please delete.
73. **(Cancelled)** Please delete.
74. **(Cancelled)** Please delete.
75. **(Cancelled)** Please delete.
76. **(Cancelled)** Please delete.
77. **(Cancelled)** Please delete.
78. **(Cancelled)** Please delete.
79. **(Cancelled)** Please delete.
80. **(Cancelled)** Please delete.

- 81. **(Cancelled)** Please delete.
- 82. **(Cancelled)** Please delete.
- 83. **(Cancelled)** Please delete.
- 84. **(Cancelled)** Please delete.
- 85. **(Cancelled)** Please delete.
- 86. **(Currently Amended)** The method of claim 17 ~~16~~, wherein each acquisition unit has a set of antenna parameters associated therewith and an adjustable transmission range, the method further comprising the step of adjusting the transmission range by adjusting the transmission parameters.
- 87. **(Currently Amended)** The method of claim 17 ~~16~~, wherein each acquisition unit has a set of antenna parameters associated therewith and an adjustable transmission direction, the method further comprising the step of adjusting the transmission direction by adjusting the transmission parameters.